

TRANSMITTER AND ASSOCIATED METHOD FOR REDUCING THE ADJACENT CHANNEL POWER DURING WIRELESS COMMUNICATIONS

ABSTRACT OF THE INVENTION

5 A transmitter for improving the spectral characteristics of a transmitted output signal includes a phase modulator for receiving a signal and modifying the phase of the signal, a power amplifier for receiving the phase modified signal from the first operation and amplifying the phase modified signal, and an amplitude modulator for receiving the amplified phase modified signal and modifying the amplitude of the amplified phase
10 modified signal. Although the phase and amplitude modulation are performed separately in order to minimize the amplitude distortion without complicating the design of the phase modulator, the combined effect of the phase and amplitude modulation is to filter the out of band spectral emissions of the transmitted output signal. Additionally, the transmitter can store the phase shift and amplitude modulation information in a table for a
15 variety of different input data sequences such that the phase shift and amplitude modulation information need merely be looked up in the table as opposed to being calculated in response to each digital signal input